

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	
Ford, Jeremy M., et al	§	
Serial No. 10/736,854	§	Confirmation No.: 9080
Filed: December 16, 2003	§	Group Art Unit: 2111
For: INFORMATION HANDLING SYSTEM	§	Examiner: Cleary, Thomas J.
INCLUDING DOCKING STATION	§	
WITH DIGITAL AUDIO CAPABILITY	§	

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Responsive to the Final Office Action dated August 14, 2008 and the Advisory Action, dated October 20, 2008 please consider the following remarks in connection with the pre-appeal brief request for review. The claims rejected and pending are 1, 5-11 and 17-21. Review of the final rejection is requested for the following reasons:

Claims 1 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (U.S. Patent No. 6,148,353) (Cho hereinafter), Schinner (U.S., Patent Application Publication No. 2004/0212822) (Schinner hereinafter), "About SP-DIF or S/PDIF" by DJ Greaves (Greaves hereinafter), and with evidence of inherency provided by Computer Organization and Design, Second Edition, by John L. Hennessey et al (Hennessey hereinafter). Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner, Greaves and Hennessey as applied to Claim 6 above, and further in view of Markow et al (U.S. Patent No. 6,359,994) (Markow hereinafter). Claims 11, 15-17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner and Greaves. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner and Greaves as applied to Claim 16 above, and further in view of Markow.

**THESE REJECTIONS ARE IMPROPER BECAUSE THE REFERENCES FAIL TO TEACH  
ALL OF THE ELEMENTS OF THE PENDING CLAIMS.**

Specifically, independent claim 1 recites, in part, "a first multi-pin docking connector in a portable portion, wherein only one audio pin of the first multi-pin docking connector is coupled to

the audio coder and decoder, and wherein the only one audio pin of the first multi-pin docking connector is coupled to the audio coder and decoder via the unidirectional S/PDIF digital audio output; a second multi-pin docking connector in a docking station, wherein only one audio pin of the second multi-pin docking connector is coupled to the only one audio pin of the first multi-pin docking connector; and a digital audio receiver to convert S/PDIF digital audio to analog audio and including a unidirectional S/PDIF digital audio input, wherein the digital audio receiver is located at the docking station and coupled to the only one audio pin of the second multi-pin docking connector via the unidirectional S/PDIF digital audio input." Emphasis added.

With reference to Claim 1, page 3 of the Office Actions mailed March 13, 2008 and August 14, 2008 states that "[a]s S/PDIF uses only a single conductor (See Page 1 Paragraphs 2-3 [of Greaves]), the use of S/PDIF as the unidirectional digital audio link would necessarily only allow a single audio pin of the docking connector to be coupled to the audio coder and decoder through the S/PDIF link, and a single audio pin of the docking connector to be connected to the digital audio receiver through the S/PDIF link." This rejection is respectfully traversed below.

Independent claims 11 and 21 recite, in part, "wherein the docking interface comprises a first multi-pin docking connector coupled to an audio coder and decoder using only one audio pin of the first multi-pin docking connector, and wherein the only one audio pin of the first multi-pin docking connector is coupled to only one audio pin of a second multi-pin docking connector, and wherein the second multi-pin docking connector is coupled to a digital audio receiver using the only one audio pin of the second multi-pin docking connector." Emphasis added.

With reference to claims 11 and 21, page 7 of the Office Actions mailed March 13, 2008 and August 14, 2008 states that "[a]s S/PDIF uses only a single conductor (See Page 1 Paragraphs 2-3 [of Greaves]), the use of S/PDIF as the digital audio signal format would necessarily only allow a single audio pin of the docking connector to be coupled to the audio coder and decoder through the S/PDIF link, and a single audio pin of the docking connector to be connected to the digital audio receiver through the S/PDIF link." This rejection is respectfully traversed below.

It is well settled that when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, it is submitted, for example, that the references, alone, or in any combination fail to teach the elements of ". . . only one audio pin . . . " of first and second multi-pin docking connectors, as recited in independent claims 1, 11 and 21, and further defined throughout the figures and specification of the pending application.

To the contrary, the cited portion of Greaves purported to teach these elements, reads as follows:

The physical link for S/PDIF carries a Biphase Manchester Coded stream. Manchester Coding is a class of line coding methods which combine a data stream with a clock on a single channel where there are up to two transitions on the line for each bit conveyed. With Biphase Manchester, there is a line transition at each end of a bit period and a central transition if the data is a one. For CD audio at 44.1 Ksps the line rate is 5.6448 megabaud and the effective data rate is 2.8224 Mbps or 352.8 kilobytes per second

RCA/phono sockets are commonly used for copper S/PDIF links, using a line level of about 0.5 volts and transformer isolation at both ends. As mentioned below, pro-audio devices may often use XLR connectors to carry the signal and they also use an AES/EBU extended subcode [].

Page 1, Paragraphs 2-3 of Greaves.

Thus, the only mention of the term "single" refers to a "single channel". As commonly known by those having ordinary skill in the audio art, a single audio channel requires two conductors. These are commonly referred to as a "+" conductor and a "-" conductor for the audio signal. Therefore, the phrase "single channel" fails to teach "... only one audio pin ... " as recited in the pending claims.

The cited section of Greaves also mentions RCA/phono sockets and XLR connectors. Here again, it is commonly known in the art that both RCA/phono connectors and XLR connectors used in audio require two or more conductors. This is evidenced on Page 1, Paragraph 6 of Greaves, which states "... XLR connectors to carry S/PDIF over **differential pair cable**..." Emphasis added. Therefore RCA/phono sockets and XLR connectors fail to teach "... only one audio pin ... " as recited in the pending claims.

In fact, It is submitted that the only finding of a single signal carrying device is of a "optic fibre". Page 2, paragraph 2 of Greaves. However, Paragraph 2 continues that the optic fibre is "non-conducting." Therefore, it is submitted that the "optic fibre" of Greaves could not teach the use of only one audio pin, as recited in the pending claims.

Therefore, it is submitted that independent claims 1, 11 and 21 and their respective dependent claims are allowable.

In response to the prior argument, the Final Office Action mailed August 14, 2008 states the following:

Applicant has argued that S/PDIF does not use a single conductor, and thus the cited prior art does not disclose that the only one audio pin of the multi-pin docking connector is coupled to the audio coder and decoder via a unidirectional

S/PDIF digital audio output (See Pages 5-8). In response, the Examiner notes that it is well known in the art that S/PDIF digital audio is sent over a single conductor, as evidenced by "SPDIF Connection" by Gabriel Torres ("Torres") (See Figures 6, 7, 8, and 9), and not as alleged by applicant, over a connection requiring both a "+" conductor and a "-" conductor. S/PDIF encodes both a data stream and a clock stream to be conveyed over a line [singular] (See Page 1 Paragraph 2 of Greaves). S/PDIF commonly uses as the single conductor an RCA cable which, as is well known in the art, consists of a single conductor surrounded by a grounded shield. Thus, as it is known in the art to transmit S/PDIF over a single conductor, one of ordinary skill in the art would naturally recognize that in the combinations of references as applied above, the S/PDIF would be transmitted over a single conductor. Further, the Examiner notes that, were S/PDIF to require multiple conductors, then only one audio pin of the multi-pin docking connector could not be coupled to the audio coder and decoder via a unidirectional S/PDIF digital audio output, as claimed, and the Applicant's claimed invention would be rendered inoperable.

Office Action mailed August 14, 2008, pages 9-10. These statements are traversed.

In light of the Examiner's above statement, and given that Greaves fails to teach "only one audio pin" as discussed above, it is clear that the rejection relies on Torres. To begin with, Torres FAILS as prior art. The pending application was filed December 16, 2003. Torres is dated November 25, 2004, nearly a year after the pending application was filed. Therefore, any reliance on this as prior art is defective. The Advisory Action mailed October 20, 2008 cites MPEP 2124 for allowing Torres to be used in the rejection for showing "a universal fact." According to MPEP 2124, "[s]uch facts include the characteristics and properties of a material or scientific truism." Surely the features of S/PDIF relied upon by the Examiner does not equate to "properties of a material or scientific truism". As a result of all the above, rejections relying on Torres are defective and should be reversed.

Second, even if Torres can be used as prior art, which it clearly cannot, the Figures 6, 7, 8, and 9 of Torres all relate to COAXIAL SPDIF connections and optical connections. The text of Torres relates to optical connections (which do not include a conductor), coaxial connections and RCA connections. COAXIAL AND RCA CONNECTIONS ARE TWO (2) CONDUCTOR CONNECTIONS. Both coaxial and RCA types of cables generally include a center conductor (conductor 1), which is surrounded by an insulator, which is then surrounded by stranded/braided cable (conductor 2), which is surrounded by an outer insulation. For example, coaxial cable is defined as "[a] cable formed from **two or more coaxial cylindrical conductors insulated from one another.** . . ." The Penguin Dictionary of Electronics, Third Edition, page 76, 1998. It is well known that RCA connections use a type of coaxial cable. The Advisory Action mailed October 20, 2008 states that "an RCA connector transmits data over only one conductor.

... and the 'outer conductor' is a grounded shield which transmits no data." However, it is submitted that if the outer conductor/conductor 2 is not connected for the teaching of Torres, any signal on conductor 1 would be "floating" and could introduce noise to the system. Thus, both coaxial and RCA connections of Torres teach having TWO CONDUCTORS, which is contrary to the pending claims. It is also submitted that none of the other references remedies the above-described deficiencies.

Third, the prior response and arguments DO NOT argue "that S/PDIF does not use a single conductor," as is claimed by the Examiner. To the contrary, the previous arguments argue that the CITED REFERENCES FAIL TO TEACH "... only one audio pin of the first multi-pin docking connector. . . " as is recited in the pending claims. See response of June 10, 2008, pages 7-8.


In light of all the above, it is impossible to render the subject matter of the claims as a whole obvious based on a single reference or any combination of the references, and the above explicit terms of the statute cannot be met. As a result, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and a rejection under 35 U.S.C. §103(a) is not applicable and should be reversed.

Therefore, independent claims 1, 11 and 21 and their respective dependent claims are submitted to be allowable. A notice of allowance of all pending claims is respectfully requested.

The Office Action contains characterizations of the claims and the related art to which the Applicant does not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in any of the Office Actions.

Other reasons for the patentability of the claims have been previously presented and will be maintained should the filing of an appeal brief become necessary.

Respectfully submitted,

  
Bart A. Fisher  
Registration No. 55,181

Dated: 11-13-08  
HAYNES AND BOONE, LLP  
IP Section  
2323 Victory Avenue, Suite 700  
Dallas, TX 75219  
Telephone: 512/867-8458  
Facsimile: 214/200-0853  
[ipdocketing@haynesboone.com](mailto:ipdocketing@haynesboone.com)

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